Summary of Changes to the Draft Specification (Version 3.0) for ENERGY STAR® Labeled Residential Ventilating Fans

On February 19, 2001, EPA issued Version 3.0 of the Eligibility Criteria. Several manufacturers and other interested parties provided comments, many of which EPA has incorporated into the final version. These changes are summarized in Section 1.

Many comments were directed at EPA's methodology for selecting fan noise and efficacy levels. Closely related were comments encouraging the use of actual performance test data. These comments are addressed in Section 2.

Note that this specification only covers bathroom, utility room, and range hood fans. Other types of residential ventilating fans may be added to the specification once EPA obtains sufficient performance data.

EPA is also considering modifying the specification to reward manufacturers that incorporate efficiency-enhancing auxiliaries.

Section 1: Summary of Changes

A. The following changes were made to the Partner Commitments:

- The ENERGY STAR label must be clearly displayed on the product packaging, in product literature, and on the manufacturer's Internet site, but does not have to be displayed on the product itself. Labeling of the actual fan unit is encouraged, but not required. (Page 1)

B. The following changes to the Eligibility Criteria reflect industry and other comments on the draft specification:

- Utility rooms were added to the list of qualifying fan applications because the same ventilating fan models may be used in either utility rooms or bathrooms. (Page 3)
- Recognizing that bathroom and utility room fans are often used for continuous ventilation, EPA has removed continuous ventilation fans from the list of excluded products. (Page 3)
- To permit all kinds of products with high-efficiency lighting to qualify for the label, the specification for lighting is now based on incorporating ENERGY STAR qualified lighting products rather than fluorescent lighting. (Page 3)
- Ventilating fans with lights, including those with night lights, must meet the requirements outlined in Sections 2.A.1 and 2.A.2. Ventilating fans with sensors, heaters, and timers may qualify for ENERGY STAR. (Page 3)
- Starting June 1, 2001, ventilating fans with and without a light source may qualify as ENERGY STAR. Those with incandescent light sources may qualify under the following conditions: The manufacturer must recommend the use of an ENERGY STAR qualified light source that uses no more than 20 watts per lamp. This recommendation must be provided in product literature and on the product Web site. Products that include an ENERGY STAR qualified light source in the box or attached to the fan unit do not have to provide this information. EPA recommends that ventilating fan manufacturers encourage their lighting fixture suppliers to label their

qualifying products. EPA also recommends that in products with night lights, manufacturers use light-emitting diodes (LEDs), an electroluminescent source, or another high-efficiency light source. (Page 3)

- Starting July 1, 2002, ventilating fans without a light source and ventilating fans with a light source that is an ENERGY STAR qualified light fixture may qualify as ENERGY STAR. A night light included with a ventilation fan must consume no more than 4 watts. (Page 4)
- The warranty period was reduced from three years to two years for product models qualifying on June 1, 2001. To be granted labeling privileges after July 1, 2002, all ventilating fans must carry a minimum three-year warranty. EPA believes that these warranty periods will inspire consumer confidence in ENERGY STAR qualified products. (Page 4)
- The maximum airflow for range hoods was established at 500 cfm. Fans larger than this are more often seen in commercial settings. Should EPA choose to develop a new specification for commercial cooking equipment, this type of appliance would be included. (Table 1, page 4)
- To avoid confusion, airflow levels (cfm) were clarified for bathroom and utility room fans in Table 1. Those fans with capacities of 1 to 75 cfm may operate at a maximum of 2.0 sones and a minimum of 1.4 cfm/W, while fans with capacities of 76 cfm and above may operate at a maximum of 1.5 sones and a minimum of 2.8 cfm/W. (Page 4)
- To promote quieter range hood fans, EPA significantly lowered the maximum sound level from 6.5 to 4.0 sones. This change required lowering the minimum efficacy level slightly from 3.0 to 2.8 cfm/W to ensure that a significant number of models will qualify. (Table 1, page 4)
- For better clarity, Table 1 now notes that products must meet both sone rating and efficacy criteria to qualify for the ENERGY STAR label. (Page 4)
- Manufacturers, rather than EPA, shall calculate efficacy by using the airflow and fan motor electrical power values determined by HVI Standard 916. The test results must be reported to EPA using the *Residential Ventilating Fan Product Submittal Form*. (Page 4)
- The effective date of the Partnership Agreement was established as June 1, 2001. (Page 5)

Section 2: Methodology for Developing the Eligibility Criteria

To effect the quickest market transformation, EPA focused on the residential fan types with well-defined testing protocols. EPA found that only bathroom/utility room fans and range hoods have protocols that qualify.

EPA's aim was to recognize the best performers by setting Eligibility Criteria levels that the top 25 percent of the market could meet. EPA wanted a very objective approach and collaborated with the Home Ventilation Institute (HVI) to develop strong, defensible performance criteria levels.

Over the course of a year, HVI collected actual testing data from its members. The data set covered over 90 percent of the units sold on the market. Before sending this information to EPA, HVI screened the data by removing all identifying information to protect the business interests of HVI members. EPA received the minimum amount of data necessary to set criteria levels — duty (e.g., range hood, bath fan), cfm, watts, sones, static pressure — and conduct an analysis to identify the top-performing models on the market.

After the fan models were sorted according to the energy-efficiency criterion, EPA identified the top-performing quartile of the models in the data set. Because consumers are sensitive to noise levels, EPA conducted another analysis, sorting this time by noise criterion. EPA observed that in most cases, the best energy-performing models were also the quietest. The levels on these criteria were then adjusted to strike a balance between energy efficiency and noise levels.